

BEFORE THE  
Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )

Amendment of Parts 22, 90 and 94 )  
of the Commission's Rules to Permit )  
Routine Use of Signal Boosters )

WT Docket No. 95-70  
RM-8200

JOINT COMMENTS OF  
ARCH COMMUNICATIONS GROUP, INC.  
AND AIRTOUCH PAGING

Arch Communications Group, Inc. ("Arch") and  
AirTouch Paging ("AirTouch"), by their attorneys and  
pursuant to Sections 1.415 and 1.419 of the Commission's  
Rules<sup>1/</sup>, respectfully submit their joint comments in  
response to the Notice of Proposed Rulemaking (the  
"Notice")<sup>2/</sup> released June 22, 1995 in the above-captioned  
proceeding.<sup>3/</sup> The following is respectfully shown:

I. Preliminary Statement

1. Arch and AirTouch have a substantial basis in  
experience for informed comment in this proceeding. Arch  
provides wireless messaging services, primarily paging, in

<sup>1/</sup> 47 C.F.R. §§1.415, 1.419.

<sup>2/</sup> FCC 95-204.

<sup>3/</sup> Arch and AirTouch also respond to certain comments in this  
proceeding that were filed in advance of the extended due  
date.

17 states, and as of March 31, 1995 had over 700,000 pagers in service. AirTouch provides wireless messaging services, primarily paging, in 21 states, and as of March 31, 1995 had over 1.76 million pagers in service. Arch and AirTouch each are licensed for both Part 22 and Part 90 paging facilities and operate in a variety of frequency bands (e.g. 150 MHz, 450 MHz and 900 MHz). The wide-area systems these carriers have developed are constantly being modified, expanded and upgraded to improve customer service. Consequently the two companies are intimately familiar with the procedures that pertain when a carrier adds transmitting locations, and are well situated to comment on the beneficial effect that would result if signal boosters could be used on a routine basis without the need to make Commission filings.

## **II. The Proposed Rule Changes Will Serve The Public Interest**

2. Arch and AirTouch support the Commission's proposal to permit the utilization of signal boosters in services governed by Parts 22, 90 and 94. The Commission's proposal will enable licensees to eliminate "dead spots" caused by natural or man-made obstructions to signal propagation and thereby enhance service provided to subscribers within authorized service areas.<sup>4/</sup> The

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<sup>4/</sup> The Commission already permits, for Part 22 stations, in-house radiation systems without licensing. See Section 22.165(d). The other Rules, however, do not permit this flexibility. The in-house radiation system also must not be located outside a building.

provision of reliable, high quality service throughout a licensee's authorized service area promotes the public interest.

3. The proposal to facilitate the utilization of signal boosters by common carrier paging companies operating in the 931-932 MHz band is particularly important and will help cure a major competitive disparity that is suffered by 931 MHz licensees. At present, non-931 MHz paging service providers may add sites within an existing contour without notification to or approval of the Commission as long as the calculated service contour of the new site is wholly within the previous contour.<sup>5/</sup> Aside from the use of very low power in-building systems,<sup>6/</sup> no such flexibility is accorded to 931 MHz paging service providers because contours are defined on a mixed mileage basis and any new site will by definition have a contour which extends outside of the contour from the prior site regardless of the station operating parameters.<sup>7/</sup> In effect, although Section 22.165 of the Commission's Rules<sup>8/</sup> permits paging licensees some flexibility, the ability for these licensees to utilize low power internal facilities to enhance service is effectively

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<sup>5/</sup> 47 C.F.R. §22.165.

<sup>6/</sup> 47 C.F.R. §22.383.

<sup>7/</sup> This is primarily the result of there being no provision for low power or directionalized antenna patterns in the 931 MHz paging Rules.

<sup>8/</sup> 47 C.F.R. §22.165.

eliminated due to the Commission's depiction of 931 MHz service and interference contours as circles centered on the transmitting antenna.<sup>9/</sup> In light of the Commission's stated goal of achieving regulatory parity among and between the various Commercial Mobile Radio Services ("CMRS"), it makes sense for the Commission to adopt rules that will provide greater flexibility to 931 MHz operators to drop in booster sites.<sup>10/</sup>

4. Also, the Commission's proposal to permit the use of signal boosters in connection with certain Part 90 services may serve as a temporary remedy for a discrepancy created by the re-write of certain Commission Rules. Specifically, Section 90.159 of the Rules<sup>11/</sup> has been revised to exclude Part 90 licensees reclassified as CMRS licensees from the group of licensees permitted to operate a

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<sup>9/</sup> 47 C.F.R. §22.537. For example, the addition of Facility B at a power lower than that of Facility A, but within the same power range as Facility A, will produce service and interference contours which extend outside of those previously authorized by Facility A unless Facility B is co-located with Facility A. The increase in the permissible effective radiated power of 931 MHz stations compounds this situation. Due to the Commission's rule change, licensees are more likely to have fewer stations operating at higher power. Thus, licensees are less likely to have numerous facilities producing a vast footprint which could encompass slight extensions from facilities such as Facility B described above.

<sup>10/</sup> See Implementation of Sections 3(n) and 332 of the Communications Act: Regulatory Treatment of Mobile Services, Second Report and Order, Gen. Docket No. 93-252, 9 FCC Rcd. 1411 (1994).

<sup>11/</sup> 47 C.F.R. §90.159.

station pursuant to conditional authorization during the pendency of an application with the FCC. The ability of these reclassified CMRS licensees to utilize signal boosters to maintain the level of service provided to subscribers will be essential until such time as the Commission can address this lost privilege.

5. Arch and AirTouch also support the Commission's proposal to permit the use of signal boosters without requiring an additional authorization from the Commission. As the FCC explained, no need for an additional authorization exists when the frequency utilized and area served have been previously licensed to the service provider. The possibility of interference from internal signal boosters is minimal. Where such interference occurs, the Commission's proposed rules would obligate the licensee to eliminate the interference. Moreover, the Commission's proposal to forego the imposition of an additional licensing requirement is consistent with its regulation of other CMRS providers.<sup>12/</sup>

6. Notably, the Commission's proposed rules governing signal boosters would not require the allocation of additional spectrum or the expenditure of additional Commission resources for the implementation of a new

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<sup>12/</sup> Pursuant to Section 22.165 of the Commission's Rules, 47 C.F.R. §22.165, CMRS licensees providing services licensed under Part 22 of the Commission's Rules may add, modify or delete internal facilities without notifying or receiving the approval of the FCC.

licensing process. The Commission has defined signal boosters as devices that utilize frequencies which the licensee is already authorized to use. Thus, no additional spectrum need be allocated. Moreover, since licensees will not be requesting new frequencies from the Commission, no issue arises with regard to the licensing of additional frequencies in the same geographic area to a single licensee. Finally, as these facilities would be wholly internal, no new frequency reuse issues will arise which might otherwise require the FCC to establish new separation requirements for these stations.

7. Also, the Commission properly has determined that the use of signal boosters should be permitted without the imposition of additional licensing obligations. Thus, the Commission need not expend resources on the development of a licensing scheme through which to authorize the use of signal boosters, the creation of Public Notices announcing such filings, or the issuance of licenses evidencing the authority to operate such facilities.

8. Finally, the Commission's proposal would not work to the advantage of certain service providers over others. The rules as proposed would permit the use of signal boosters only in areas which the licensee previously has been authorized to serve. The rules as proposed would not permit licensees to use boosters in an effort to gain a

foothold in unserved outlying areas, or to encroach upon the service area of a nearby licensee.

9. In sum, the rules would have public interest benefits without countervailing adverse administrative or regulatory consequences.

**III. Arch And AirTouch Agree With Certain  
Other Commenters In The Proceeding**

10. Arch and AirTouch support the comments submitted by Paging Network, Inc. ("PageNet") in this proceeding. PageNet stressed the importance of ensuring that signal boosters are not utilized to extend service outside of the currently authorized service area. To that end, PageNet requests that proposed section 22.385 of the Commission's Rules be revised to conform to proposed sections 90.219(a) and 94.95(a) and explicitly prohibit the location of signal boosters outside of currently authorized service areas. Further, PageNet suggests that proposed rules under Part 22 relating to the operating requirements of signal boosters should be consistent with rules proposed under Parts 90 and 94. Arch and AirTouch agree that, consistent with the Commission's policy of achieving regulatory parity among similar services, these operating requirements should be consistent across the board.

11. Arch and AirTouch also support the comments filed by Andrew Corporation ("Andrew"). Andrew explains that technological advances achieved in the amplification of radio signals and output level control circuits have reduced

the potential for interference from the use of signal boosters. In that same vein, Andrew suggests that the Commission increase the permitted total output power of signal boosters. Andrew indicates that it does not even produce signal boosters at power levels which would comply with the Commission's proposed limit, as many of its customers express a need for higher power equipment. According to Andrew, one signal booster operating at a power within the Commission's proposed limit would not be sufficient to cover a dead spot in the service area. A licensee would have to employ several boosters, thus increasing the risk of interference to adjacent operators.

**IV. The Public Interest Supports According  
Paging Licensees Even More Latitude  
Than Is Presently Proposed**

12. Although the Commission's proposal is laudable, it does not go far enough. The proposed rule change only would allow licensees to add transmitters with power levels up to 500 milliwatts.<sup>13/</sup> Arch and AirTouch understand that there currently is no equipment commercially available to take advantage of this power level. While a few manufacturers make low power transmitters, they do not conform to the proposed power limit and, under existing Commission Rules, would need to be separately licensed.<sup>14/</sup>

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<sup>13/</sup> 47 C.F.R. 22.385(b).

<sup>14/</sup> The Commission's Rules permit licensees to add in-building radiation systems without need of a license. See 47 C.F.R. (continued...)



13. As pointed out earlier, the current Commission Rules governing 900 MHz paging operations do not distinguish between a one watt or a 125 watt transmitter, or omnidirectional or directionalized antenna patterns, for antenna heights up to 1500 feet.<sup>14/</sup> Consequently, for 900 MHz stations, all transmitters must be licensed unless they are located at existing licensed locations. In connection with the rewrite of Part 22 of the Commission's Rules, several commenters, including AirTouch, suggested that the Commission adopt service and interference formulas for 900 MHz paging facilities that would distinguish low power or directionalized antenna patterns from high power or omnidirectional antenna patterns. The same public interest consideration that supports amending the Rules to permit the use of signal boosters also supports adopting formulas that would more accurately reflect the service area associated with low power transmitters and directionalized antenna patterns. The adoption of such formulas for 900 MHz operations would permit licensees to better serve the public by allowing them to fill in areas inside existing licensed

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<sup>14/</sup>(...continued)

22.165(d). The power levels associated with in-house building systems is not limited so long as it does not extend the service contour of the existing system. See 47 C.F.R. 22.99. These in-building transmitters are typically 2-5 watts.

<sup>15/</sup> See 47 C.F.R. 22.537(e) and (f).

contours to provide enhanced services to subscribers without being required to notify the Commission.<sup>16/</sup>

14. In addition, the adoption of low power and directionalized antenna pattern formulas is dictated by regulatory parity. The Commission's Rules for Narrowband PCS permit licensees to use appropriate engineering standards to deduce the interference contours of systems at the borders.<sup>17/</sup> Narrowband PCS and paging are competitive services, and the Commission is obligated to accord such services regulatory parity under the Omnibus Budget Reconciliation Act of 1993.<sup>18/</sup> Therefore, the Commission should adopt low power and directionalized antenna pattern formulas similar to those for Narrowband PCS.<sup>19/</sup>

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<sup>16/</sup> If the Commission concludes that this proposed change goes beyond the scope of this proceeding, Arch and AirTouch urge the Commission to include this issue in the forthcoming proceeding in which the licensing differences between Part 90 and Part 22 CMRS stations are to be further reconciled.

<sup>17/</sup> 47 C.F.R. 24.132(e). This is exactly the formula that the Commission should adopt for Part 22 and Part 90 licensees.

<sup>18/</sup> Pub. L. No. 103-66, Title VI, Section 6002(b), 107 Stat. 312, 392 (1993).

<sup>19/</sup> Again, this could be handled in the forthcoming Part 90-Part 22 reconciliation proceeding, if the Commission prefers.

15. Finally, the Commission should permit licensees providing paging services in the 900 MHz band to serve dead spots within their authorized service area either with signal boosters, as proposed herein, or with low power transmitters. The adoption of low power and directionalized antenna pattern formulae to depict service and interference contours of all paging stations would permit licensees to add fill-in transmitters without exceeding their currently authorized service areas. The public interest considerations supporting the utilization of signal boosters also support the availability of low power transmitters as a service option to licensees. In addition, the ability to select between a low power transmitter and a signal booster would enable each licensee to determine the most efficient and effective method of providing service throughout its licensed area.

#### Conclusion

The Commission's proposed rules would promote the public interest goal of the provision of reliable, high quality service to the public, promote regulatory parity and can be implemented without the expenditure of substantial Commission resources, Arch and AirTouch commend the

Commission's efforts in this proceeding and support the rules proposed.

Respectfully submitted,

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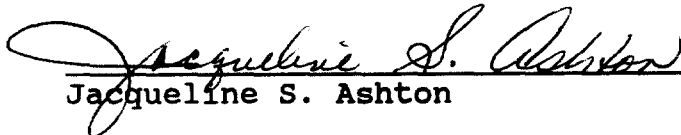
**CERTIFICATE OF SERVICE**

I, Jacqueline S. Ashton, secretary with the law firm Bryan Cave LLP, hereby certify that on this 14th day of August 1995, a copy of the foregoing "Joint Comments of Arch Communications Group, Inc. and AirTouch Paging" was sent first-class postage prepaid to the following:

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